

# Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series Certification Report

Certification No.: KECS-CISS-0603-2015

2015. 4.17



IT Security Certification Center

## History of Creation and Revision

No.	Date	Revised Pages	Description
00	2015.4.17	-	Certification report for Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series - First documentation

This document is the certification report for Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series of SAMSUNG ELECTRONICS Co., Ltd.

The Certification Body  
IT Security Certification Center

The Evaluation Facility  
Korea Security Evaluation Laboratory (KSEL)

## Table of Contents

<b>1. Executive Summary</b> .....	<b>5</b>
<b>2. Identification</b> .....	<b>7</b>
<b>3. Security Policy</b> .....	<b>8</b>
<b>4. Assumptions and Clarification of Scope</b> .....	<b>8</b>
<b>5. Architectural Information</b> .....	<b>10</b>
<b>6. Documentation</b> .....	<b>15</b>
<b>7. TOE Testing</b> .....	<b>15</b>
<b>8. Evaluated Configuration</b> .....	<b>16</b>
<b>9. Results of the Evaluation</b> .....	<b>16</b>
9.1 Security Target Evaluation (ASE) .....	17
9.2 Life Cycle Support Evaluation (ALC).....	17
9.3 Guidance Documents Evaluation (AGD) .....	18
9.4 Development Evaluation (ADV).....	18
9.5 Test Evaluation (ATE).....	19
9.6 Vulnerability Assessment (AVA) .....	19
9.7 Evaluation Result Summary.....	19
<b>10. Recommendations</b> .....	<b>20</b>
<b>11. Security Target</b> .....	<b>21</b>
<b>12. Acronyms and Glossary</b> .....	<b>22</b>
<b>13. Bibliography</b> .....	<b>24</b>

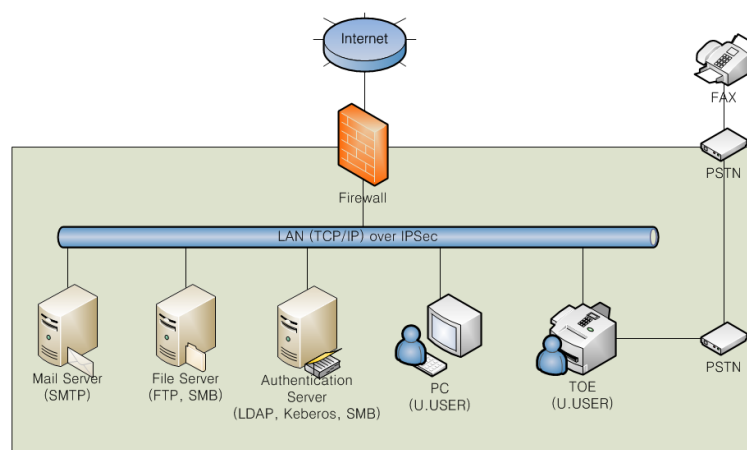
# 1. Executive Summary

This report describes the certification result drawn by the certification body on the results of the EAL2+ evaluation of Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series from SAMSUNG ELECTRONICS Co., Ltd. with reference to the Common Criteria for Information Technology Security Evaluation (“CC” hereinafter)[1]. It describes the evaluation result and its soundness and conformity.

The Target of Evaluation (TOE) is MFPs (Multi- Function Peripherals) as an IT product. It controls the operation of the entire MFP, including copy, print, scan, and fax functions on the MFP controller.

The evaluation of the TOE has been carried out by Korea Security Evaluation Laboratory (KSEL) and completed on April 10, 2015. This report grounds on the evaluation technical report (ETR) KSEL had submitted [3] and the Security Target (ST) [4]. The ST has conformance claim to U.S. Government Protection Profile for Hardcopy Devices Version 1.0 (IEEE Std.2600.2™-2009)[5]. All Security Assurance Requirements (SARs) in the ST are based only upon assurance component in CC Part 3, and the TOE satisfies the SARs of Evaluation Assurance Level EAL2 augmented by ALC\_FLR.2. Therefore the ST and the resulting TOE is CC Part 3 conformant. The Security Functional Requirements (SFRs) are based only upon functional components in CC Part 2, and the TOE satisfies the SFRs in the ST. Therefore the ST and the resulting TOE is CC Part 2 conformant.

The TOE is operated in an internal network protected by a firewall. U.USER is connected to the TOE and may perform jobs that are allowed (see Figure 1).



[Figure 1] TOE Operational Environment

The TOE is intended to operate in a network environment that is protected by a firewall from external malicious attacks, and with reliable PCs and authenticated servers. U.USER is able to access the TOE by using local user interface (LUI) or remote user interface (RUI). The LUI is designed to be accessed by U.USER. The U.USER can operate copy, scan, and fax functions through the LUI. In the case of a scanning job, U.USER can operate the scanning job using the LUI and transfer the scanned data to a certain destination by email addresses and servers. U.USER can also use their PCs to print out documents or to access the TOE through the internal network. U.ADMINISTRATOR can enable/disable Automatic Image Overwrite; start/stop Manual Image Overwrite, and change a Password via the LUI. U.ADMINISTRATOR can access TOE through the RUI using a web browser through IPsec protocol. If IPsec is not configured in the TOE, all of network connection would be blocked. From there, U.ADMINISTRATOR can add/change/delete user accounts, change the U.ADMINISTRATOR's ID and password, review the security audit service, and download the security audit report. The U.USER's account information that requires asking for internal authentication by TOE can be stored on the hard disk drive of the TOE. All of the information stored on the hard disk drive is protected by the TOE. In the case of external authentication using Kerberos, LDAP, SMB server, the external authentication servers will perform the user authentication using database of authentication server. The authentication server is assumed to be protected from external environmental space.

**Certification Validity:** The certificate is not an endorsement of the IT product by the government of Republic of Korea or by any other organization that recognizes or gives effect to this certificate, and no warranty of the IT product by the government of Republic of Korea or by any other organization recognizes or gives effect to the certificate, is either expressed or implied.

## 2. Identification

The TOE is identified as follows:

Developer	SAMSUNG ELECTRONICS Co., Ltd.
Name	Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series
Version	A4.79
Hardware (MFP Model)	X7400LX, X7400GX, X7500LX, X7500GX, X7600LX, X7600GX, X703GX

[Table 1] TOE identification

Scheme	Korea Evaluation and Certification Guidelines for IT Security (August 8, 2013) Korea Evaluation and Certification Regulation for IT Security (November 1, 2012)
TOE	Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series
Common Criteria	Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 4, CCMB-2012-09-001 ~ CCMB-2012-09-003, September 2012
EAL	EAL2+ (augmented by ALC_FLR.2)
Protection Profile	IEEE Std.2600.2™-2009 U.S. Government Approved Protection Profile - U.S. Government Protection Profile for Hardcopy Devices Version 1.0
Developer	SAMSUNG ELECTRONICS Co., Ltd.
Sponsor	SAMSUNG ELECTRONICS Co., Ltd.
Evaluation Facility	Korea Security Evaluation Laboratory (KSEL)
Completion Date of Evaluation	April 10, 2015
Certification Body	IT Security Certification Center

[Table 2] Additional identification information

[Table 3] shows the specification for TOE.

MFP Model	X7400LX X7400GX	X7500LX X7500GX	X7600LX X7600GX	X703GX
Color /Mono	Color	Color	Color	Color
PPM	40ppm	50ppm	60ppm	59ppm
Processor	A3000 (1.5GHz)			
RAM	DDR3 4,096MB			
ROM	NAND 4,096MB			
Interface	High-Speed USB 3.0 Host, High-Speed USB 3.0 Peripheral, Ethernet 10/100/1000 Base TX			
FAX	ITU-T G3, Super G3, 33.6 Kbps, MH/MR/MMR/JBIG			
HDD	SATA2 320 GB			
Scanner	DSDF (Dual Scan Document Feeder) 80 IPM (LX model)/120 IPM (GX model)			
Display	10.1" 1024 x 600 WSVGA TFT Color Graphic LCD with Touch-Screen, 24-bit color			

[Table 3] General Specification for TOE

### 3. Security Policy

The TOE complies security policies defined in the ST [4] by security objectives and security requirements. The TOE provides security features to identify and authenticate authorized users, to generate audit records of the auditable events, and to securely manage the TOE functionality and authorized user accounts information.

For more details refer to the ST [4].

### 4. Assumptions and Clarification of Scope

The following assumptions describe the security aspects of the operational environment in which the TOE will be used or is intended to be used (for the detailed and precise definition of the assumption refer to the ST [4], chapter 3.3):

- The TOE is located in a restricted or monitored environment that provides protection from unmanaged access to the physical components and data interfaces of the TOE.
- TOE Users are aware of the security policies and procedures of their

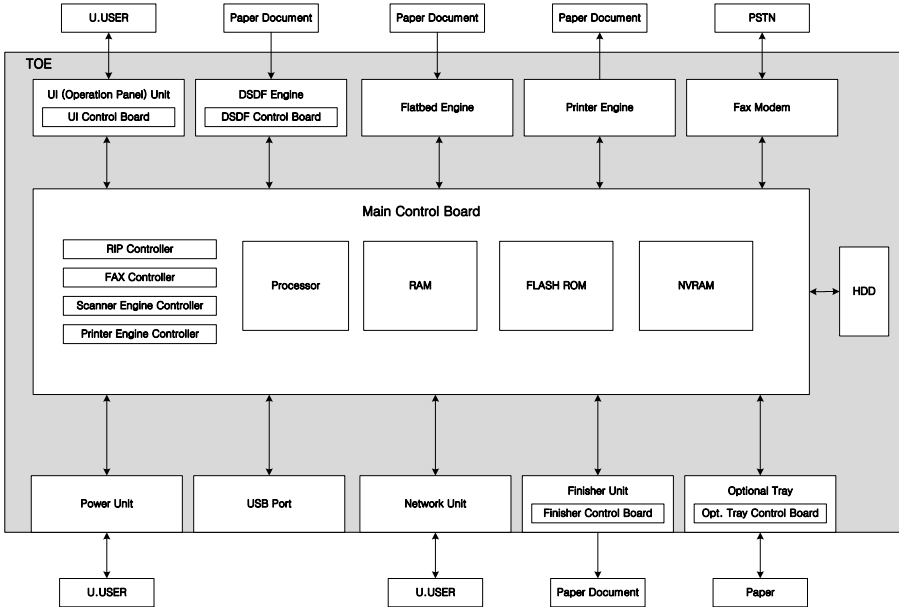


organization and are trained and competent to follow those policies and procedures.

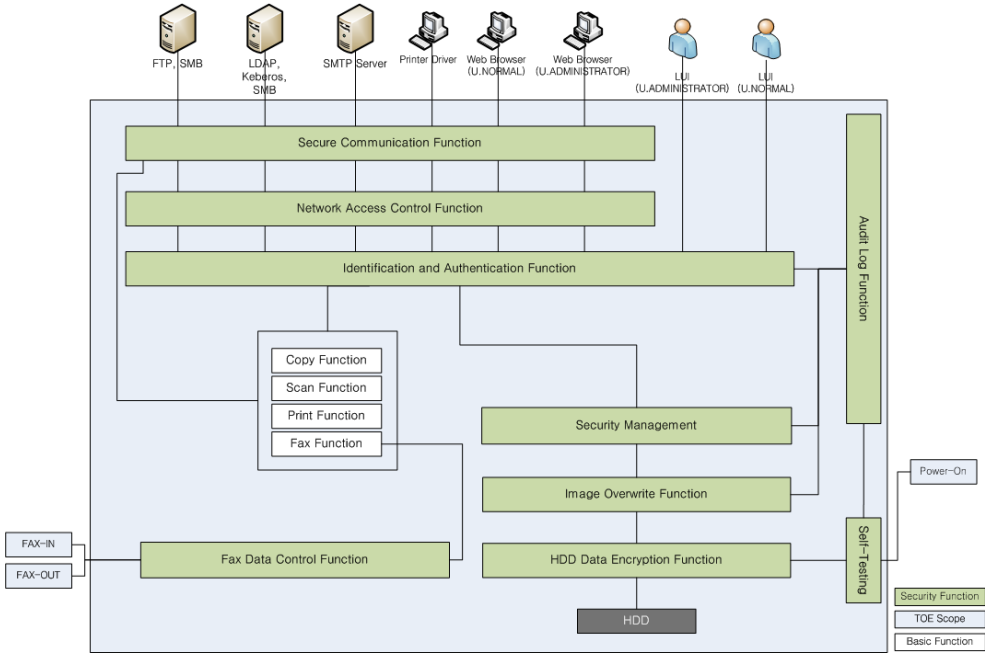
- Administrators are aware of the security policies and procedures of their organization, are trained and competent to follow the manufacturer's guidance and documentation, and to correctly configure and operate the TOE in accordance with those policies and procedures.
- Administrators do not use their privileged access rights for malicious purposes.

# 5. Architectural Information

[Figure 2] and [Figure 3] show the scope of the TOE.



[Figure 2] Physical Structure of MFP



[Figure 3] Logical boundary of the TOE

The following security functions are provided by the TOE:

- Identification & Authentication

The TOE provides two types of user identification and authentication methods. If U.ADMINISTRATOR configures the local authentication, the MFP will authenticate the U.USER against an internal database. If U.ADMINISTRATOR selects the external authentication as an authentication method, then MFP will authenticate the U.USER using an external authentication server.

U.USER should be identified and authenticated by entering both ID and Password to access to the TOE management functions. If U.USER fails to login specific times, the system blocks the session of the U.USER during predefined duration.

U. ADMINISTRATOR can configure Identification & Authentication Policy by using LUI or RUI.

U. ADMINISTRATOR can also give specific permission for U.USER to only use certain feature of the machine.

The TOE provides the Common Access Control & TOE Function Access Control based on the user role assigned to a user group ID by U.ADMINISTRATOR when U.NORMAL performs read/delete/modify operations on the data owned by U.NORMAL or when U.NORMAL accesses print/scan/copy/fax functions offered by the MFP.

The TOE shall terminate an interactive session after predefined time interval of user inactivity.

- Network Access Control

The MFP system has a network interface connected to a network. The MFP system can send/receive data and MFP configuration information and thus is able to configure MFP settings.

There are a couple of methods to access and communicate with the MFP from outside of the TOE through the network, and the TOE manages all incoming packets via a network interface.

1) Protocol and Port Control:

The TOE can only allow protocols and ports configured by U.ADMINISTRATOR.

U.ADMINISTRATOR can configure this information via the LUI or RUI.

2) IP and MAC address filtering:

U.ADMINISTRATOR can make filtering rules for IP addresses and MAC addresses.

After that, packets are only allowed as per the IP filtering rule registered by

U.ADMINISTRATOR.

Packets via MAC addresses registered by U.ADMINISTRATOR are not allowed.

- Security Management

The TOE accomplishes security management for the security function, TSF data, and security attribute.

Only U.ADMINISTRATOR can manage the security functions through the LUI (Local User Interface) and RUI (Remote User Interface): security functions can be start and stop by U.ADMINISTRATOR. The LUI is touch-screen based management service which is provided by TOE. RUI is web-based management service using HTTP/HTTPS protocol.

TSF data and their possible operations are specified by U.ADMINISTRATOR.

Security attributes can be operated by U.ADMINISTRATOR.

- Security Audit Data

The TOE creates an audit record security audit event including job log, security event log, and operation log. The audit data consist of the type of event, date and time of the event, success or failure, log out and access of log data.

Only U.ADMINISTRATOR is authorized to view (or export) the audit data but even U.ADMINISTRATOR shall not delete log data manually.

The TOE protects Security Audit Data stored on the hard disk drive. It prevents any unauthorized alteration to the Security Audit Data, and when each log events exceeds the maximum number, the TOE overwrites the oldest stored audit records and generates an audit record of overwriting.

- Image Overwrite

The TOE provides Image Overwrite functions that delete the stored file from the MFP's hard disk drive. The Image Overwrite function consists of Automatic Image Overwrite and Manual Image Overwrite. The TOE implements an Automatic Image Overwrite to overwrite temporary files created during the copying, printing, faxing and scanning (scan to e-mail, scan to FTP, and scan to SMB task processes). The image overwrite security function can also be invoked manually only by U.ADMINISTRATOR through the LUI. Once invoked, the Manual Image Overwrite cancels all print and scan jobs, halts the

printer interface (network), overwrites the hard disk according to the procedures set by U. ADMINISTRATOR. If there are any problems during overwriting, the Manual Image Overwrite job automatically restarts to overwrite the remaining area.

- Data Encryption

The TOE provides an encryption function during the data storage procedure and a decryption function in the process of accessing stored data from hard disk drive.

The TOE generates cryptographic keys when the TOE is initialized at the first setout the secret key (256 bits) is used for encrypting and decrypting user data and TSF data that is stored on the HDD. Access to this key is not allowed to any U.USER including U.ADMINISTRATOR.

The TSF shall destroy cryptographic keys in accordance with overwriting a used cryptographic key with a newly generated cryptographic key. Before storing temporary data, document data, and system data on the HDD of the MFP, the TOE encrypts the data using AES 256 algorithm and cryptographic key.

When accessing stored data, the TOE decrypts the data using the same algorithm and key.

Therefore, the TOE protects data from unauthorized reading and falsification even if the HDD is stolen.

- Fax Data Control

If the received fax data includes malicious content, it may threaten the TOE asset. To prevent this kind of threat, the TOE inspects whether the received fax image is standardized with MMR, MR, or MH of T.4 specification or not before forwarding the received fax image to e-mail or SMB/FTP. U. ADMINISTRATOR can restrict this forwarding function. When non-standardized format data are discovered, the TOE destroys the fax image.

- Self Testing

During initial start-up, the TOE performs self test. Self testing executes TSF function to verify the correct operation of the HDD encryption function. Also, the TOE verifies the integrity of the encryption key data and TSF executable code by the self testing.

- Secure Communication

The TOE also provides secure communication between the TOE and the other trusted IT product to protect communicated data from modification or disclosure by IPsec. The network which connected without IPsec shall not be allowed to communicate with MFP.

- Non-TSF Function

TOE includes the local user interface based on Android platform. Although the Android platform is used to TOE's user interface, local user interface does not provide any core Android system application such as Android system setting, Search, Browser, Contacts, Gallery, and Music. Therefore, U.USER cannot access any core Android system application and its related setting interfaces.

## 6. Documentation

The following documentation is evaluated and provided with the TOE by the developer to the customer.

Identifier	Version
Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series User's Guide	V1.1
Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series Installation Guide	V1.0

[Table 4] Documentation

## 7. TOE Testing

The developer took a testing approach based on the security services provided by each TOE component based on the operational environment of the TOE. The developer's tests were performed on each distinct operational environment of the TOE (see chapter 1 of this report for details about operational environment of the TOE).

The developer tested all the TSF and analyzed testing results according to the assurance component ATE\_COV.1. This means that the developer tested all the TSFI defined in the functional specification, and demonstrated that the TSF behaves as described in the functional specification.

Therefore the developer tested all SFRs defined in the ST [4].

The evaluator performed all the developer's tests, and conducted independent testing listed in ETR [3], based upon test cases devised by the evaluator. The evaluator set up the test configuration and testing environment consistent with the ST [4]. The evaluator considered followings when devising a test subset:

- TOE security functionality: The TOE is an embedded software product for MFPs (Multi-Function Peripherals) as an IT product. It controls the operation of the entire MFP, including copy, print, scan, and fax functions on the MFP controller, and
- Developer's testing evidence: The evaluator analyzed evaluation deliverables for ATE\_COV.1, ATE\_FUN.1, and ATE\_IND.2 to understand behavior of the TOE security functionality and to select the subset of the interfaces to be tested, and

- Balance between evaluator's activities: The targeted evaluation assurance level is EAL2+, and the evaluator tried to balance time and effort of evaluator's activities between EAL2+ assurance components.

In addition, the evaluator conducted penetration testing based upon test cases devised by the evaluator resulting from the independent search for potential vulnerabilities. These tests cover weakness analysis of source code, privilege check of executable code, bypassing security functionality, invalid inputs for interfaces, flaws in networking protocol implementation, vulnerability scanning using commercial tools, disclosure of secrets, and so on. No exploitable vulnerabilities by attackers possessing basic attack potential were found from penetration testing.

The evaluator confirmed that all the actual testing results correspond to the expected testing results. The evaluator testing effort, the testing approach, configuration, depth, and results are summarized in the ETR [3].

## **8. Evaluated Configuration**

The TOE is Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series. The TOE is an embedded software product for MFPs as an IT product. It controls the operation of the entire MFP, including copy, print, scan, and fax functions on the MFP controller.

The TOE is identified by TOE name and version number including release number. The TOE identification information is provided GUI.

And the guidance documents listed in this report chapter 6, [Table 4] were evaluated with the TOE.

## **9. Results of the Evaluation**

The evaluation facility provided the evaluation result in the ETR [3] which references Single Evaluation Reports for each assurance requirement and Observation Reports.

The evaluation result was based on the CC [1] and CEM [2].

As a result of the evaluation, the verdict PASS is assigned to all assurance components of EAL2+.



## 9.1 Security Target Evaluation (ASE)

The ST Introduction correctly identifies the ST and the TOE, and describes the TOE in a narrative way at three levels of abstraction (TOE reference, TOE overview and TOE description), and these three descriptions are consistent with each other. Therefore the verdict PASS is assigned to ASE\_INT.1.

The Conformance Claim properly describes how the ST and the TOE conform to the CC and how the ST conforms to PPs and packages. Therefore the verdict PASS is assigned to ASE\_CCL.1.

The Security Problem Definition clearly defines the security problem intended to be addressed by the TOE and its operational environment. Therefore the verdict PASS is assigned to ASE\_SPD.1.

The Security Objectives adequately and completely address the security problem definition and the division of this problem between the TOE and its operational environment is clearly defined. Therefore the verdict PASS is assigned to ASE\_OBJ.2. The ST doesn't define any extended component. Therefore the verdict PASS is assigned to ASE\_ECD.1.

The Security Requirements is defined clearly and unambiguously, and it is internally consistent and the SFRs meet the security objectives of the TOE. Therefore the verdict PASS is assigned to ASE\_REQ.2.

The TOE Summary Specification addresses all SFRs, and it is consistent with other narrative descriptions of the TOE. Therefore the verdict PASS is assigned to ASE\_TSS.1.

Thus, the ST is sound and internally consistent, and suitable to be use as the basis for the TOE evaluation.

The verdict PASS is assigned to the assurance class ASE.

## 9.2 Life Cycle Support Evaluation (ALC)

The developer clearly identifies the TOE and its all associated configuration items. Therefore the verdict PASS is assigned to ALC\_CMC.2.

The configuration management document verifies that the configuration list includes the TOE, the parts that comprise the TOE, and the evaluation evidence. Therefore, the verdict of ALC\_CMS.2 is the Pass.

The delivery documentation describes all procedures used to maintain security of the TOE when distributing the TOE to the user. Therefore the verdict PASS is assigned to ALC\_DEL.1.

Thus, the security procedures that the developer uses during the development and maintenance of the TOE are adequate. These procedures include the life-cycle model used by the developer, the configuration management, the security measures used throughout TOE development, and the delivery activity.

The flaw remediation procedures are established and they provide for the correctness of security flaws and for assurance that the corrections introduce no new security flaws. Therefore the verdict PASS is assigned to ALC\_FLR.2.

The verdict PASS is assigned to the assurance class ALC.

### **9.3 Guidance Documents Evaluation (AGD)**

The procedures and steps for the secure preparation of the TOE have been documented and result in a secure configuration. Therefore the verdict PASS is assigned to AGD\_PRE.1.

The operational user guidance describes for each user role the security functionality and interfaces provided by the TSF, provides instructions and guidelines for the secure use of the TOE, addresses secure procedures for all modes of operation, facilitates prevention and detection of insecure TOE states, or it is misleading or unreasonable. Therefore the verdict PASS is assigned to AGD\_OPE.1.

Thus, the guidance documents are adequately describing the user can handle the TOE in a secure manner. The guidance documents take into account the various types of users (e.g. those who accept, install, administrate or operate the TOE) whose incorrect actions could adversely affect the security of the TOE or of their own data.

The verdict PASS is assigned to the assurance class AGD.

### **9.4 Development Evaluation (ADV)**

The security architecture document is structured to ensure that TSF cannot be compromised or bypassed, and appropriately describes that the TSF which provides the security domain separates these domains from each other. Therefore, the verdict of ADV\_ARC.1 is the Pass.

The functional specifications specifies the objective, way of using, input parameter, operation, and error message to the TSFI at equal detail level, and accurately and completely describes the TSFI. Therefore, the verdict of ADV\_FSP.2 is the Pass.

The TOE design description provides the structure of the TOE in terms of subsystems, identify all subsystems of the TSF, and describe the behavior of each SFR-supporting or SFR-non-interfering. Therefore, the verdict of ADV\_TDS.1 is the Pass.

Therefore, the security architecture document (the TSF architecture attribute which describes how the TSF security enforcement is not compromised or bypassed), functional specification(TSF interface description) and design description, which are included in the development documentation, are adequate to give understanding about how the TSF satisfies the SFRs, and how these SFRs implementation are not damaged or bypassed.

The verdict PASS is assigned to the assurance class ADV.

## 9.5 Test Evaluation (ATE)

The developer has tested all of the TSFIs, and that the developer's test coverage evidence shows correspondence between the tests identified in the test documentation and the TSFIs described in the functional specification. Therefore the verdict PASS is assigned to ATE\_COV.1.

The developer correctly performed and documented the tests in the test documentation. Therefore the verdict PASS is assigned to ATE\_FUN.1.

By independently testing a subset of the TSF, the evaluator confirmed that the TOE behaves as specified in the design documentation, and had confidence in the developer's test results by performing all of the developer's tests. Therefore the verdict PASS is assigned to ATE\_IND.2.

Thus, the TOE behaves as described in the ST and as specified in the evaluation evidence (described in the ADV class).

The verdict PASS is assigned to the assurance class ATE.

## 9.6 Vulnerability Assessment (AVA)

By penetrating testing, the evaluator confirmed that there are no exploitable vulnerabilities by attackers possessing basic attack potential in the operational environment of the TOE. Therefore the verdict PASS is assigned to AVA\_VAN.2.

Thus, potential vulnerabilities identified, during the evaluation of the development and anticipated operation of the TOE or by other methods (e.g. by flaw hypotheses), don't allow attackers possessing less than an enhanced-basic attack potential to violate the SFRs. The verdict PASS is assigned to the assurance class AVA.

## 9.7 Evaluation Result Summary

Assurance	Assurance	Evaluator Action	Verdict
-----------	-----------	------------------	---------

Class	Component	Elements	Evaluator Action Elements	Assurance Component	Assurance Class
ASE	ASE_INT.1	ASE_INT.1.1E	PASS	PASS	PASS
		ASE_INT.1.2E	PASS		
	ASE_CCL.1	ASE_CCL.1.1E	PASS	PASS	
	ASE_SPD.1	ASE_SPD.1.1E	PASS	PASS	
	ASE_OBJ.2	ASE_OBJ.2.1E	PASS	PASS	
		ASE_ECD.1	ASE_ECD.1.1E	PASS	
	ASE_ECD.1.2E		PASS		
	ASE_REQ.2	ASE_REQ.2.1E	PASS	PASS	
ASE_TSS.1	ASE_TSS.1.1E	PASS	PASS		
	ASE_TSS.1.2E	PASS			
ALC	ALC_CMS.2	ALC_CMS.2.1E	PASS	PASS	PASS
	ALC_CMC.2	ALC_CMC.2.1E	PASS	PASS	
	ALC_DEL.1	ALC_DEL.1.1E	PASS	PASS	
		ALC_DEL.1.2E	PASS	PASS	
ALC_FLR.2	ALC_FLR.2.1E	PASS	PASS		
AGD	AGD_PRE.1	AGD_PRE.1.1E	PASS	PASS	PASS
		AGD_PRE.1.2E	PASS		
	AGD_OPE.1	AGD_OPE.1.1E	PASS	PASS	
ADV	ADV_TDS.1	ADV_TDS.1.1E	PASS	PASS	PASS
		ADV_TDS.1.2E	PASS		
	ADV_FSP.2	ADV_FSP.2.1E	PASS	PASS	
		ADV_FSP.2.2E	PASS		
ADV_ARC.1	ADV_ARC.1.1E	PASS	PASS		
ATE	ATE_FUN.1	ATE_FUN.1.1E	PASS	PASS	PASS
	ATE_IND.2	ATE_IND.2.1E	PASS	PASS	
		ATE_IND.2.2E	PASS		
ATE_COV.1	ATE_COV.1.1E	PASS	PASS		
AVA	AVA_VAN.2	AVA_VAN.2.1E	PASS	PASS	PASS
		AVA_VAN.2.2E	PASS		
		AVA_VAN.2.3E	PASS		
		AVA_VAN.2.4E	PASS		

[Table 5] Evaluation Result Summary

## 10. Recommendations

The TOE security functionality can be ensured only in the evaluated TOE operational

environment with the evaluated TOE configuration, thus the TOE shall be operated by complying with the followings:

- Since the TOE is assumed to be evaluated product under specific configuration settings in connection with TSF, administrator should operate the TOE according to the settings specified in Evaluated Configuration in evaluation technical report. Therefore, administrator should keep in mind that the TOE is not considered to be evaluated product if it is operated with different settings specified in the Evaluated Configuration.
- All of the external IT entities (User/Administrator's PC, External storage server, External authentication server, NTP server, etc.) that communicate with the TOE over a network should support IPSEC protocol that is compatible with the security policy of the TOE. It should be remembered that all network communications are not allowed if there is no IPSEC channel to securely communicate with the TOE.
- If there are any problems, such as blackout or power failure, during manual image overwriting, the image overwriting function is terminated remaining the image overwriting of the memory area uncompleted. Therefore, administrator should keep in mind that the manual image overwriting function automatically restarts to overwrite the remaining memory area if the power is supplied again.
- There are two types of users, administrator(role of admin) allowed to manage the security functions of the TOE and general user(role of general user, restricted info. user, limited resource user, guest) allowed to use the MFP basic functions such as printing, copying, scanning and faxing. Therefore, administrator should be careful not to grant the role of admin to general user.
- Use the TOE function to configure allowed administrator's IP's so that unauthorized access can be blocked.

## 11. Security Target

Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series Security Target Version 1.1, April 4, 2015 [4] is included in this report by reference.

## 12. Acronyms and Glossary

CC	Common Criteria
EAL	Evaluation Assurance Level
ETR	Evaluation Technical Report
LUI	Local User Interface
RUI	Remote User Interface
LDAP	Lightweight Directory Access Protocol
PP	Protection Profile
RFC	Request For Comments
SAR	Security Assurance Requirement
SFR	Security Functional Requirement
PPM	Pages Per Minute
MMR	Secure Socket Layer
MR	Modified Modified READ coding
MH	Modified Huffman Coding
ST	Security Target
TOE	Target of Evaluation
TSF	TOE Security Functionality
Multi-Function Printer, MFP	MFP is a machine that incorporates the functionality of multiple devices (copy, print, scan, or fax) in one
U.ADMINISTRATOR	A User who has been specifically granted the authority to manage some portion or all of the TOE and whose actions may affect the TOE security policy. Administrators may possess special privileges that provide capabilities to override portions of the TSP
U.NORMAL	A User who is authorized to perform User Document Data processing functions of the TOE
U.USER	Any authorized User
Manual Image Overwrite	The Manual Image Overwrite function overwrites all stored files, including image files and preserved files on the hard disk drive, and the function should only be manually performed by a U.ADMINISTRATOR through the LUI. The image data is completely overwritten 1 ~ 9 times by using DoD 5220.28-M, DoD 5220.28-M(ECE), Australian ACSI

33, VSITR (German standard) standard, and Custom setting methods

Automatic Image Overwrite	The Automatic Image Overwrite automatically carries out overwriting operations on temporary image files at the end of each job such as copy, scan, scan-to-email, scan-to-FTP, or scan-to-SMB. Or the Automatic Image Overwrite overwrites the files on the hard disk drive when a user initiates a delete operation
Image file	Temporarily stored file that is created during scan, copy, or fax job processing
Image Overwrite	This is a function to delete all stored files on the hard disk drive. There are two kinds of image overwriting: Automatic Image Overwrite and Manual Image Overwrite

## 13. Bibliography

The certification body has used following documents to produce this report.

- [1] Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 4, CCMB-2012-09-001 ~ CCMB-2012-09-003, September 2012
- [2] Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 4, CCMB-2012-09-004, September 2012
- [3] Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series, Evaluation Technical Report V1.00, April 10, 2015
- [4] Samsung Multifunction MultiXpress X7400, X7500, X7600, X703 Series, Security Target V1.1, April 4, 2015
- [5] IEEE Std.2600.2™-2009, U.S. Government Approved Protection Profile - U.S. Government Protection Profile for Hardcopy Devices Version 1.0